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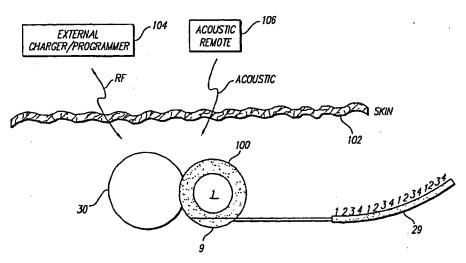
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(54) Title: HIGH CONTACT COUNT, SUB-MINIATURE FULLY IMPLANTABLE COCHLEAR PROSTHESIS



8 A3

tronic circuitry including a battery and an implantable microphone (1), are housed, (b) an active electrode array (29) that provides a programmable number of active electrode contacts through which stimulation current may be selectively delivered to surrounding tissue, preferably through the use of appropriate stimulation groups, and (c) a connector (9) that allows the active electrode array to be detachably connected with the electronic circuitry within the sealed case. The active electrode array provides a large number of both medial contacts and lateral contacts, any one of which may be selected to apply a stimulus pulse through active switching elements included within the array. The hermetically sealed case within which the electronic circuitry, battery, and microphone are housed may be replaced, when needed, through minimally invasive surgery. Further, the electronic circuitry housed within the hermetically sealed case may be programmed, as needed, using acoustic signals from an acoustic remote control (106) and/or RF control signals from an external programmer (104).

INTERNATIONAL SEARCH REPORT

International Application No PC | /US 01/10268

A. CLASSIFICATION OF SUBJECT MATTER IPC 7 A61F11/04 A61N H04R25/00 A61N1/375 A61N1/36 According to International Patent Classification (IPC) or to both national classification and IPC **B. FIELDS SEARCHED** Minimum documentation searched (classification system followed by classification symbols) HO4R A61F A61N IPC 7 Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched Electronic data base consulted during the international search (name of data base and, where practical, search terms used) EPO-Internal C. DOCUMENTS CONSIDERED TO BE RELEVANT Relevant to claim No. Citation of document, with indication, where appropriate, of the relevant passages Category 1,2,8-13 X US 5 814 095 A (LEYSIEFFER HANS ET AL) 29 September 1998 (1998-09-29) claims; figure 4 1,2,8-13P,X DE 199 15 846 C (IMPLEX HEAR TECH AG) 31 August 2000 (2000-08-31) claims; figures 1 US 4 729 366 A (SCHAEFER DONALD W) X 8 March 1988 (1988-03-08) claims; figures 1 US 5 957 958 A (LOEB GERALD E ET AL) X 28 September 1999 (1999-09-28) claims; figures Patent family members are listed in annex. Further documents are listed in the continuation of box C. ١x Special categories of cited documents: *T* later document published after the international filing date or priority date and not in conflict with the application but "A" document defining the general state of the art which is not considered to be of particular relevance cited to understand the principle or theory underlying the invention "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to *E* earlier document but published on or after the international filing date involve an inventive step when the document is taken alone document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such docu-O document referring to an oral disclosure, use, exhibition or ments, such combination being obvious to a person skilled other means in the art. document published prior to the international filing date but later than the priority date claimed *&* document member of the same patent family Date of mailing of the international search report Date of the actual completion of the international search 03/12/2001 21 November 2001 Authorized officer Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl. Kuehne, H-C Fax: (+31-70) 340-3016

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